OBSTRUCTION OF THE BOWEL FROM MECKEL'S DIVERTICULUM.

A CHOLECYSTOTOMY.

BY

J. A. PRINCE, M.D., of springfield, ill.

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OBSTRUCTION OF THE BOWEL FROM MECKEL'S DIVERTICULUM—A CHOLECYSTOTOMY

By J. A. PRINCE, M.D., of springfield, ill.

On the 17th of last March, Bertha P., aged four years and three months, while putting on her clothes, was suddenly seized with acute lancinating pains, referred to the umbilicus. For three days previously she had complained of occasional pain in this region. Obstruction of the bowels soon became manifest, and was complete. On March 23d, I was called by the attending physicians, Drs. Mudd, of Athens, and Williamson, of Cantrall, to operate. Drs. S. M. Stocker, of Duluth, Minn., and N. S. Penick, of this city, accompanied me.

Her physicians stated that every means known had been employed to produce an action of the bowels, but without success. Opiates had been freely administered to control pain, which had been constant and excessive. During the three days preceding my visit, stercoraceous vomiting had been present. The temperature had ranged from normal to 100.5°, and the pulse from 108 to 137. The abdomen was tympanitic and tense, though not greatly distended.

One inch to the left of the umbilicus was an indurated area about two inches in its vertical diameter, by an inch and a half in its transverse diameter. Pressure over this area caused pain. A diagnosis of intussusception was made, and operation was advised. I explained to the parents and friends the dangers of the



operation, and the almost certain prospect of a fatal termination without surgical interference. The proposal was accepted, and I proceeded without delay. An incision was made in the median line, and upon opening the peritoneum a large amount of thin fecal fluid gushed out. The abdominal cavity was carefully cleansed by flushing with hot sterilized water. The point of obstruction at once came into view, and was found to be due to an encircling band, the tension of which was so great that it had accomplished an almost complete resection of the incarcerated loop, the distal end being entirely cut through, and the proximal end nearly so.

The resection of the loop was completed, the ends freshened, and an end-to-end approximation made; the abdomen was flushed, drained, and the wound closed. The operation occupied one hour. Death occurred two

hours later, from shock.

As the condition of the patient was very bad during the operation, and we were compelled to work by the feeble light of a kerosene lamp, all haste possible was made, and the seat of the obstruction was not noted, nor was the character of the band ascertained until the specimen was examined at leisure.

The resected loop measured four inches, and was from the lower portion of the ileum, though its exact distance from the cecum was not noted. From the side of the gut-wall projected a diverticulum of globular shape, one-quarter of an inch in diameter at its junction with the intestine; five-eighths of an inch in its greatest diameter, and one and a half inches long, ending in an elongated cord or band, which was impervious. The length of this band can only be estimated at about an inch, as it was broken in liberating the intestine, leaving one-half of an inch of its length attached to the diverticulum. This elongation was attached to the mesentery below the origin of the diverticulum, forming the incarcerating ring.



Meckel's diverticulum is rarely found to have this form, it being usually of a conical shape with its greatest diameter at its origin. Indeed, Treves says: "In no case, so far as I am aware, has it been seen to assume a polypoid form and present a comparatively narrow attachment." The cut shows well the diverticulum and its attachment.

The literature of this subject is very meager, the best descriptions that I have been able to find being in Heath's Dictionary of Practical Surgery, and Treves's little book on Intestinal Obstruction. Quain's Anatomy merely mentions the fact that a pouch or diverticulum may sometimes exist at a point in the lower ileum. To Treves I am indebted for the following description and facts:

Meckel's diverticulum is due to the persistence of the vitelline duct. When met with in its most perfect condition it exists as a tube, having a structure similar to that of the small intestine itself, that extends between the lower part of the ileum and the umbilicus. The length of this tube is, on an average, three inches. Sometimes it exists only as a nipple-like projection. On the other hand, cases are recorded in which the diverticulum, in the form of a free tube, attained the length of ten inches. The diverticulum is always single, and arises from the ileum, from one to three feet above the ileo-cecal valve.

In the majority of cases the end of the diverticulum is free. Very often, however, it is continued in the form of a solid cord. This diverticular ligament may break from its attachment to the parietes, and may float free within the abdominal cavity. Under such circumstances, however, it is much more usual for it to acquire fresh adhesions to some point of the peritoneal surface. These secondary adhesions of a free diverticulum, or of a diverticular cord at the extremity of one of the processes, are of considerable importance in the etiology of

strangulation of the intestine. This secondary attachment is most often to the mesentery.

In twenty-three cases collected by Cazin, and nineteen by Treves, the attachments were as follows:

Near the umbilicus .			IO
" inguinal ring			I
" femoral ring			I
To the small gut .			9
" cecum			3
" colon			I
" mesentery .			17

CHOLECYSTOTOMY.

Mrs. D., aged thirty-nine years, was sent to me through the courtesy of Dr. Hobbs, of Mound Station, Ill. During the last four years the patient has suffered intensely from repeated attacks of biliary colic. Her physician found calculi in the stools after several of the attacks. When first seen by me, June 2, 1892, she was intensely jaundiced and greatly emaciated from much suffering. The attacks of colic were occurring as often as every week, and accompanied by a severe rigor, followed by high temperature, reaching 102° and 103°; the jaundice had of late been constant. I was unable to find calculi in the stools following attacks, after careful examinations repeated several times. As she was rapidly losing ground, and was in every way miserable, she readily consented to an operation, which was performed July 3d.

An incision four inches in length was made parallel to the lower margin of the liver, and over the gall-bladder, which could be indistinctly palpated; dense adhesions were encountered between the gall-bladder and the neighboring intestines, which were separated. The organ was much distended and contained calculi. It was sutured to the margin of the wound, and five days later was opened. Quite a quantity of clear, viscid fluid

escaped, and about twenty-four calculi were removed. An attempt at this time to pass a probe into the duct failed; the orifice of the duct seemed to be completely closed. No bile whatever escaped from the bladder; during the healing process there was only the same clear fluid found on first opening the viscus. The discharge of this character, however, was quite profuse.

In four weeks she left the sanitarium, and two weeks later the fistula had completely closed. For ten weeks following the operation she improved rapidly in health; she was free from pain, and the jaundice entirely disappeared. Then the old attacks returned, seemingly with even greater severity; she returned to me September 23d. Her jaundice had returned and her general health

was much worse.

Recognizing that there must exist an obstruction below the gall-bladder, a second operation was advised, and carried out September 26th. One calculus was found in the gall-bladder, which, as before, contained only clear fluid. Upon careful examination a rounded body, as large as a good-sized marble, was found deep down under the surface of the liver: this was movable to a very limited degree. Crushing was attempted, first with the fingers and then with instruments, but for fear of doing damage to the tissues the attempt was abandoned. The duct was finally incised and the large calculus extracted with forceps. The wound in the duct was closed as securely as possible with a continuous fine silk suture. As the gall-bladder was somewhat mutilated, and evidently useless, it was excised, and the wound packed with iodoform-gauze. On the second day after the operation bile began to drain up through the gauze packing, and though the dressings were frequently changed, the clothing and bedding were often saturated. The wound healed rapidly, and at the end of four weeks had entirely closed, and she returned home. At this time (December 15th) she has remained free from any return of her trouble.

The calculus in this case must have been located in the cystic duct, completely closing it, and encroaching on the common duct to such an extent as to almost completely close it. During the first operation it was probably drawn back somewhat from the common duct by the manipulation upon the gall-bladder, allowing the free flow of bile. The weight of the calculus was thirty-eight grains.





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